

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

ROBERT P. DUNN, DRILL FAB,
SERVICES LIMITED, and MEGADRILL
SERVICES LIMITED

Plaintiffs,

V

ADMIRALTY MARINE AND
STRUCTURAL ENGINEERING, INC.,
and EDWARD TURNER,

Defendants.

CIVIL ACTION NO. H-12-03643

**MEMORANDUM AND OPINION SETTING OUT FINDINGS OF FACT AND
CONCLUSIONS OF LAW**

This case arises out of a 2008 oral contract between Megadrill Services, Ltd., which owns and charters drilling barges, and Admiralty Marine and Structural Engineering, Inc. (“AMASE”), an engineering design firm. AMASE agreed to design a drilling-rig mast, “[t]he structure used to support the crown block and the drill string” on a drilling rig. A separate company, Discovery Drilling Equipment (“DDE”), fabricated the mast and installed it on the rig. The mast failed the first time it was raised and required significant repairs. Megadrill Services, Ltd., its owner, Robert Dunn, and a related company, Drill Fab Services, (together, “Megadrill”) sued AMASE and its owner, Edward Turner, asserting causes of action for breach of the design contract, negligence, and breach of express and implied warranties. (Docket Entry No. 1 at 5–7). Megadrill claimed that AMASE’s and Turner’s improper design caused the mast failure. AMASE and Turner contended that the fabricator made changes that increased the mast weight and caused the failure. The parties also disputed the amounts and elements of recoverable damages.

In March 2015, the court held a five-day bench trial on the negligence claims against Turner and AMASE and the breach of contract claim against AMASE.¹ At the bench trial, the court admitted exhibits and heard testimony from the following witnesses:

- Robert Dunn, Megadrill's founder and co-owner;
- Ian Dunn, a Megadrill employee who presided over the effort to raise the mast and saw it fail;
- Dr. George Ross, the plaintiffs' engineering expert;
- Christopher Haist, a former DDE engineer who worked on the mast fabrication;
- Neal Hare, who served as AMASE's project engineer for the mast design;
- Michael Topham, Megadrill's co-owner; and
- Edward Turner, AMASE's founder and president.

This Memorandum and Opinion sets out the findings and conclusions resulting from that bench trial. Based on the evidence, the parties' arguments, the record, and the applicable law, and for the reasons stated in detail below, the court finds and concludes as follows:²

- AMASE breached its contract with Megadrill by transmitting issued-for-construction design drawings calling for undersized pins, without performing calculations to ensure that the pins could withstand the anticipated forces on the mast, and by failing to promptly notify DDE after learning that the 3-inch connecting pins were undersized and that a larger size should be used instead.

¹ Before the bench trial, the court granted summary judgment dismissing claims for breach of express and implied warranty against both Turner and AMASE and breach of contract against Turner. The court denied the motion for summary judgment on the negligence claims against both defendants and the breach of contract claim against AMASE. (Docket Entry No. 45).

² Any findings of fact that are also or only conclusions of law are so deemed. Any conclusions of law that are also only findings of fact are so deemed.

- Turner negligently performed his duty to supervise the AMASE engineer working on the drawings and to provide Megadrill and DDE construction drawings with the proper pin size.
- The economic loss rule does not bar Megadrill's negligence claim.
- DDE was negligent in adding weight to the mast and not verifying the effect on the mast's structural integrity.
- Because Turner and AMASE were primarily responsible for designing the mast, issued the design drawings, and knew of the inadequacy of the pin size but failed to notify DDE, they are 75 percent at fault.
- Because AMASE engineers created the flawed drawings and failed to transmit the proper information, as between Turner and AMASE, Turner is 25 percent at fault, and AMASE is 50 percent at fault.
- DDE is 25 percent at fault based on its admissions of fault, its status as an API license holder, its decisions to add weight to the mast, and its failure to perform calculations verifying mast integrity.
- Megadrill is entitled to recover its costs for removing and replacing the A-frame and repairing the mast. Megadrill may not recover the consequential damages from the delay in performing a separate charter agreement, because those damages were not foreseeable to AMASE or Turner.

The parties must submit a proposed final judgment consistent with this Memorandum and Opinion by **October 23, 2015**.

I. Findings of Fact

A. The Parties

Megadrill, which is incorporated in the British Virgin Islands, constructs and charts drilling-barge rigs for the offshore oil and gas industry. Robert Dunn founded both Megadrill and Drill Fab Services in the late 2000s.³ Drill Fab Services is a facilitator of payment for Megadrill's equipment.

AMASE is a Texas-based structural engineering firm providing engineering design services to clients like Megadrill in the offshore oil and gas industry. Edward Turner, a Texas-licensed professional engineer domiciled in Texas, founded AMASE in 1986 and served as its president. (Docket Entry No. 67, at 144).

In April 2009, Dunn, acting on behalf of Megadrill and Drill Fab Services, entered into an oral agreement with Turner, who was acting on behalf of AMASE. Dunn and Turner had worked together in the 1970s. They agreed that AMASE would design the rig and mast for the *Majestic*, a posted swamp-drilling barge rig. Posted barge rigs are "mobile drilling platforms that are submersible and are built to work in seven to 20 feet of water. They are towed by tugboats to the drill site with the derrick in a horizontal position. The lower hull is then submerged by flooding compartments until it rests on the river or sea floor. The derrick is then raised and drilling operations are conducted with the barge resting on the bottom."⁴ (Docket Entry No. 64, at 36).

³ After the plaintiffs rested, the court granted AMASE's motion for partial findings under Federal Rule of Civil Procedure 52(c), finding that Megadrill is the proper party plaintiff in interest. (Docket Entry No. 67, at 125).

⁴ *Drilling Rig & Derrick Fabrication*, SUPERIOR DERRICK SERVICES, available at <http://www.superiorderrick.com/Rig-and-Derrick-Fabrication.php>.

B. The Trial Testimony and the Credibility of the Witnesses

1. Robert Dunn

Robert Dunn testified about his relationship with Edward Turner, the verbal contract between Megadrill and AMASE, and about the *Majestic*. (Docket Entry No. 64, at 32-35, 37-38). Dunn testified that Neal Hare and Turner at AMASE knew that the mast on the *Majestic* would have a top drive. A top drive is an electric or hydraulic motor suspended in the rig mast. The top drive travels up and down the mast.⁵ Dunn testified that in meetings and emails, Hare discussed the fact that the *Majestic* would require a top drive. (*Id.* at 39-41, 52-54, 58).

AMASE had previously worked on refurbishing a vessel called the *Constitution*, which had a top drive on the mast. The design drawings for the *Majestic* mast were based on the mast drawings for the *Constitution*. Dunn testified that the *Constitution* design called for 4-inch, not 3-inch, pins on the mast A-frame-to-A-frame connections. (*Id.* at 46-47). Dunn testified that he believed that the design drawings AMASE sent to DDE for the *Majestic* showed a top drive. (*Id.* at 61, 64).

On cross-examination, Dunn acknowledged that his deposition testimony had been equivocal about whether the *Majestic* design drawings sent to DDE contained a top drive. Dunn stated that after looking more at the drawings, he had become more confident that the drawings did show a top drive. (Docket Entry No. 65, at 12-14).

Dunn also testified about the losses Megadrill incurred as a result of the mast failure. Megadrill was supposed to begin a 3-year charter in Nigeria with the *Majestic*. The mast failure delayed the start of the charter by 60 days, resulting in added expenses. (Docket Entry No. 64, at 109, 111-12). Dunn acknowledged on cross-examination that the mast failure did not prevent

⁵ Mark Ramsey, Top Drive, SCHLUMBERGER OILFIELD GLOSSARY, available at <http://www.glossary.oilfield.slb.com>.

Megadrill from performing the charter, but rather delayed its performance by 60 days. (Docket Entry No. 65, at 23-24). The 60-day delay caused some “hard feelings” with the other party to the charter agreement, but Megadrill received the full amount under that agreement. (*Id.*). Dunn acknowledged that 9 to 14 days out of the 60-day delay were attributable to issues beside the mast failure. (*Id.* at 20). The court finds that Robert Dunn’s testimony was consistent with other testimony and evidence and was credible.

2. Ian Dunn

DDE fabricated the mast in its facility in the Ukraine and sent it to a shipyard in Batam, Indonesia where the *Majestic* was assembled. (Docket Entry No. 64, 87). Neal Hare of AMASE organized the mast assembly in Batam after DDE fabricated it. (Docket Entry No. 65, 51). Ian Dunn oversaw the *Majestic*’s construction in Batam on Megadrill’s behalf while his brother, Robert Dunn, was in the United States. (*Id.* at 49).

Ian Dunn testified about his past work in the oil and gas industry as a derrickman, an assistant driller, and supervisor. (*Id.* at 43-49). He had supervised the construction of four land rigs with smaller masts for his brother’s earlier company, Axxis Drilling, before supervising the *Majestic*’s construction in Batam. (*Id.* at 46).

Ian Dunn was AMASE’s project manager for the *Constitution*’s refurbishment. (*Id.* at 47). He testified that the *Constitution* design and drawings included a top drive and that the AMASE design drawings for the *Majestic* also showed a top drive. (*Id.* at 115).

Ian Dunn also testified about the *Majestic*’s mast failure. On December 19, 2011, he decided to raise the mast six inches off the ground to “check the brakes on the drawworks.” He testified that it was late afternoon and still light when the work took place. (*Id.* at 53, 55-56). Neal Hare of AMASE was not present because he was ill. (*Id.* at 56, 102). Ian Dunn testified

that he stationed crew members on the rig floor and the helicopter deck so they could “check everything while we were picking up” the mast. For safety reasons, he did not station anyone next to the A-frames. (Docket Entry No. 65, at 53).

Ian Dunn testified that Hare had told him that the theoretical weight of the mast was 635,000 pounds. (*Id.* at 54). The mast was slowly raised and the weight indicator was checked to make sure the theoretical weight was not exceeded. (*Id.* at 57). The mast was raised to the point that the weight indicator showed 200,000 pounds, then 400,000 pounds, with no problem. Ian Dun heard a “pop” after the mast was raised to “about 595,000, 600,000” on the weight indicator. (Docket Entry No. 65, at 58). He stopped the operation and investigated. The investigation showed that the connection pins between the mast A-frames had failed and one had bent. (*Id.* at 61).

On cross-examination, Ian Dunn acknowledged that he was not an engineering expert, that one of the AMASE drawings he thought showed top-drive tracks in fact did not, and that he had not previously raised such a large mast on a newly constructed barge. (*Id.* at 65, 103). He did, however, have experience raising other masts and overseeing similar projects. (*Id.* at 46-47).

The court finds credible Ian Dunn’s testimony about when he raised the mast and how he did it. To the extent that his testimony about the time he began raising the mast conflicts with Neal Hare’s, the court finds Ian Dunn’s testimony more credible. The court finds much less credible, however, Ian Dunn’s testimony that the drawings AMASE sent DDE showed a top drive.

3. Dr. George Ross

Dr. George Ross testified as an expert on Megadrill's behalf. Dr. Ross has a Ph.D. in Mechanical Engineering from Texas A&M University. Since 1996, he has worked for Stress Engineering Services, where he routinely performs design review for derricks and masts. He heads the structural department of Stress Engineering's upstream group. (*Id.* at 123).

Based on reviewing a thumb drive AMASE produced, AMASE's design-data book, two construction drawing packets from DDE, inspection reports by CalgaRIG after the mast failure, and deposition transcripts, Dr. Ross concluded that the "root cause of the failure was an undersized pin that was in the original [AMASE] drawings." (*Id.* at 126, 270). Dr. Ross testified that the mast would have failed with the 3-inch pins shown in the AMASE drawings, even without the additional weight from DDE's changes to the mast design during the fabrication. While Dr. Ross thought that AMASE's design drawings and calculations included a top drive, he acknowledged during cross-examination that the AMASE drawings did not show top-drive tracks. (*Id.* at 182). Although AMASE's design databook showed that AMASE knew in the early stages of its work on the *Majestic* that the mast design would include a top drive, the drawings did not include it. (*Id.* at 169-70).

Dr. Ross testified that, consistent with AMASE's calculations after the mast failure, the 3-inch pins were overstressed from a bending perspective. Dr. Ross testified that before the mast failure, AMASE had failed to perform the calculations necessary to determine the bending stress of either the 3-inch or 4 inch pins. (*Id.* at 163). Dr. Ross testified that DDE "should have been notified immediately once [AMASE] found out that those pins were overstressed" and that AMASE's failure to do so fell short of professional standards for engineers. (Docket Entry No. 65, at 168). Dr. Ross concluded that if AMASE's designs had called for 4-inch pins, the mast

would not have failed, even with the additional weight that DDE added during fabrication. (*Id.* at 175). Dr. Ross testified that he did not rely on DDE's failure report in reaching his conclusions that the AMASE pin design and calculations caused the mast failure. (*Id.* at 228).

Dr. Ross also testified about the connection-pin strength. Although the AMASE drawings called for pins with a strength of 110 ksi, the pins that failed on the DDE-constructed mast had a 125 to 130 ksi strength. (*Id.* at 147, 243). Dr. Ross explained that the pins DDE showed in its drawings and used in fabricating the mast were stronger than the 50 ksi yield the AMASE drawings specified. (*Id.* at 244-45). On cross-examination, Dr. Ross acknowledged that he had not seen the results of DDE's finite-element analysis or its design databook. He did not discuss DDE's drawings in his expert report despite concluding that the fabricated mast would not have failed with 4-inch pins. (*Id.* at 186-87).

The court finds credible Dr. Ross's conclusions that AMASE's pin design and the calculations of the pins' weight-bearing capabilities were defective. The court also credits his opinions that Turner and Hare should have notified DDE when they discovered in December 2010 that the 3-inch connecting pins were too small and would be overstressed by the mast weight. The court does not find credible Dr. Ross's opinion that DDE bore no responsibility for the *Majestic's* mast failure. He did not discuss DDE's work with specificity, including its failure to make calculations to verify that the connection pins could withstand the weight of the mast as fabricated.

4. Christopher Haist

Christopher Haist, DDE's director of engineering when the mast was fabricated, testified about the changes DDE made to the mast design during the fabrication process. These changes added roughly 67,895 pounds to the mast. Haist believed that the design drawings AMASE

forwarded to DDE, S108 revision zero, page 1 of 5, showed a top drive. (Docket Entry No. 66, at 54-55); (Pl.'s Ex. 6). Haist testified that DDE designed top-drive tracks for the mast after receiving the AMASE drawings, but DDE did not have AMASE review those designs. (Docket Entry No. 66, at 17-18).

Haist testified that DDE was responsible under the relevant API standards to verify that the fabricated mast would withstand the weight and stress of anticipated alterations. (Docket Entry No. 66, at 49-51). DDE conducted a finite-element analysis to comply with this obligation, but this analysis did not take into account pin-connection details and therefore could not verify whether the pin size and strength were adequate. (*Id.* at 41, 43). Haist testified that DDE did not do finite-element analyses on pin connections because those were typically verified by hand calculations. Haist could not recall, however, whether DDE made any hand calculations for the pin connections on the *Majestic's* mast. (*Id.* at 44-45, 60, 72).

Haist testified that DDE received issued-for-construction design drawings from AMASE calling for 3-inch connecting pins. DDE did not receive revised drawings from AMASE in January 2011 and February 2011 that called for a larger pin size. (*Id.* at 64-65). Haist testified that if he were in AMASE's position and discovered that the 3-inch pins would fail, he would have informed the fabricator immediately. (*Id.* at 77).

Haist testified that if he were designing the mast and knew that it called for a top drive, he would have to consider the additional weight of top-drive tracks in the design. (Docket Entry No. 66, at 72-73). If he were the designer and did not have information about the weight and specifications of top-drive tracks, he would seek out that information from the manufacturer. (*Id.* at 73). Haist testified that DDE changed some aspects of the mast design, but in ways both parties knew and anticipated. (*Id.* at 63, 87). The court finds Haist's testimony largely credible.

5. Neal Hare

Neal Hare, the AMASE employee who served as the project manager for the *Majestic*, explained how he created the *Majestic* designs using computer models and plans from the *Constitution*. (Docket Entry No. 67, at 15). Because Hare is not a professionally licensed engineer, his work at AMASE had to be supervised by an engineer who was licensed. (*Id.* at 85). Hare testified that Turner had this responsibility but did not actively supervise Hare's work. (*Id.* at 17).

Hare denied that he included a top drive in the mast's design or that the drawing he was given to create the *Majestic*'s mast included one, although he acknowledged that he "considered that there would be a top drive power unit on the drill floor" in designing the *Majestic*'s substructure. (*Id.* at 8). He could not say whether the drawings AMASE sent DDE showed a top drive or top-drive tracks. He attended an August 2010 meeting in which Dunn of Megadrill, Godin of DDE, and Nicholson of GDS discussed the fact that DDE would add top-drive tracks to the mast. Hare sent Turner emails after the meeting including this information. (Docket Entry No. 67, at 11, 13).

Hare testified that he would have performed hand calculations to determine the allowable stress for the connecting pins before transmitting the design drawings to DDE. Hare could not find records showing that he made those calculations. (*Id.* at 25-26). Hare could not recall specific information about the mast's connection pins, whether there was a top drive or tracks, or what he told Turner. (*Id.* at 12-13, 20). When faced with emails and other evidence showing that he and Turner knew that a top drive would be added and that the connecting pins were too small, Hare did not deny receiving the emails or hearing the discussions. Nor did he dispute the accuracy of what was written and said. When asked whether he had considered the "weight of

the top drive at 35,000 pounds in performing these calculations to design the substructure,” Hare responded “[a]pparently so.” (Docket Entry No. 67, at 13).

Hare also testified that he knew from his January 2010 trip to DDE’s fabrication yard that DDE was going to use European steel shapes in fabricating the mast. (*Id.* at 20). Hare reported this to Turner. (*Id.*). He could not recall whether he went over calculations or received DDE’s electronic documents when he visited DDE’s fabrication yard in 2011. (*Id.* at 49). Hare acknowledged, however, that Haist of DDE told him about some changes that DDE would be making to the mast, including changing from bronze bushings to roller bearings. (*Id.* at 48-49). Hare testified that a bending-stress calculation should have been, but was not done, in January 2011. (*Id.* at 57-59). He agreed that it was Turner’s responsibility to make sure that AMASE sent DDE the updated design drawings calling for larger pins to DDE. (*Id.* at 62).

Hare also acknowledged that he learned about the change in pin-connection size from 3 inches to 4 inches in February 2011. He was in Batam and could have walked over and told Jacob Paramby or Ian Dunn of Megadrill, but he did not do so. (*Id.* at 65-67). Hare agreed that a designer in AMASE’s position was responsible for telling the fabricator if there was a change in the A-frame to A-frame pin connection. (*Id.* at 78).

Hare also testified about his January 2011 visit to DDE’s fabrication yard in Batam. He denied attending the follow-up meeting that Galen Tucker of DDE described in his email to Robert Dunn, in which DDE employees discussed the additional weight of the top-drive tracks and made new calculations based on the additional weight. (*Id.* at 95). Hare testified, contrary to Ian Dunn, that on the day the mast failed, it was already dark when he left the shipyard and raining.

The court finds Hare's testimony somewhat credible. But his inability to recall important details or emails undermines his credibility in resolving critical disputes. He repeatedly recalled documents, meetings, and information only after his memory was refreshed by documents, and then only to the extent of what the documents said. Although he testified about how late in the day the mast was raised and how dark it was, that testimony was much less credible than Ian Dunn's account.

6. Michael Topham

Michael Topham, Megadrill's co-owner, provided further testimony about the company's losses and expenses as a result of the mast failure. Topham, who had an accounting background, testified that the company incurred \$141,950 in unavoidable costs each day the *Majestic* repairs delayed the start of the charter agreement in Nigeria. (Docket Entry No. 67, at 111). The operating-day rate accounted for \$110,000 of this figure. The "predominant costs" in the day rate were "labor, employees, insurance, catering, repairs of equipment while it's in the dock, transportation costs and numerous rentals that were negotiated prior to" the mast failure. (*Id.* at 112-13). The remaining \$31,950 came from the "marine spread," which was for the "four tugboats and various barges" that Megadrill's charter contract required it to lease. (*Id.* at 114).

Topham testified that the *Majestic* arrived in Nigeria on March 1, 2015. The day-rate and marine spread began on that date and continued until April 30, 2015, when the vessel began service after the refabricated mast was installed. On cross-examination, however, Topham clarified that of the \$141,950 in daily losses that Megadrill incurred while the *Majestic* was out of commission, roughly \$72,000 was added costs and \$68,000 was the profit the company made once it resumed the charter agreement. (*Id.* at 121).

The court finds that Topham's testimony about the amounts of Megadrill's costs from the delay was credible despite the lack of supporting documents. Topham had personal knowledge about the facts he discussed, and the defendants did not present contravening evidence.

7. Edward Turner

Edward Turner, AMASE's founder and president, gave expert and fact testimony. He testified that AMASE relied on the design drawings for the *Constitution* in designing the *Majestic's* mast, that the *Constitution* design drawings did not show a top drive or top-drive tracks, and that the design drawings for the *Majestic* did not call for a top drive or top-drive tracks. (Docket Entry No. 67, at 148). Turner testified that the item in the drawings that others believed to be a top drive was actually a "traveling block" used as a placeholder to help orient the viewer. (*Id.* at 163). Turner also pointed out that the specifications AMASE prepared to use in seeking bids from different manufacturers did not call for a top drive or top-drive tracks. AMASE sent the specifications to Robert Dunn, who raised no concerns. (Docket Entry No. 67, at 151-52); (Def's Ex. 80).

Turner also testified that to design top-drive tracks, he would need the size, spacing, and moment-of-force information, which Dunn did not give AMASE. (Docket Entry No. 67, at 165-66). Turner testified that if he had that information, he would then need two to three weeks to "reanalyze the mast based on those—the torque requirements and the spacing required." (*Id.* at 166).

Turner assumed that DDE would simply convert the measurements from Imperial to metric and otherwise rely on his drawings in fabricating the mast. (*Id.* at 156-57). Instead, DDE changed "[l]iterally, everything," adding and redistributing weight along the mast. Turner had no discussions with DDE about the changes they were making to the mast. (*Id.* at 157). The

changes increased the stress that raising the mast would generate, including the stress on the connecting pins. (*Id.* at 171-72).

DDE also increased the bull-line diameter from 2^{3/8} to 3 inches. (*Id.* at 177-78). The bull-line is used to raise the mast, Turner testified, and increasing the diameter increased the pressure on the sheaves, a type of pulley.⁶ (*Id.* at 179-80).

Turner contended that DDE's changes added 4,867,895 pounds to the mast. The weight consisted of 67,895 pounds from additional materials and another 4,800,000 pounds from the forces generated at the moment of lift. (Docket Entry No. 67, at 182-83). Turner opined that this resulted in 101,880 pounds of force exerted on each pin at the moment of lift. (*Id.* at 183).

Turner also testified about the changes DDE made to material strength. AMASE's mast design drawings called for pins with 125 to 150 ksi, but DDE used pins with 124 ksi in the mast fabrication. While AMASE's drawings called for plates supporting the pins with 50 ksi, DDE used plates with 47 ksi. (*Id.* at 189).

Turner opined that if DDE had built the mast following AMASE's design specifications, including using 3-inch pins, the mast would not have failed. (*Id.* at 207). Turner pointed to the fact that the sleeves—the pipes in which the pins were encased—were not damaged. He concluded “that the side plates pulled the pin physically out of the—out of the pipe when they deflected because they were understrength.” (*Id.* at 207). According to Turner, “[t]he sleeve increases the net diameter of the pin itself and, therefore, it keeps the pin from bending.” (Docket Entry No. 68, at 55). Turner testified that Dr. Ross's opinion that DDE had no responsibility for the mast failure was “[t]otally erroneous” because API and everyone else,

⁶ Mark Ramsey, Sheave, Schlumberger Oilfield Glossary, available at <http://www.glossary.oilfield.slb.com/en/Terms/s/sheave.aspx>

including DDE itself, stated that DDE was responsible for verifying the mast design and integrity. (*Id.* at 204).

Turner criticized decisions Ian Dunn made when he raised the *Majestic* mast. Turner had himself participated in raising over 100 masts. Turner testified that Ian Dunn should have had people watching the A-frame, should not have tried to raise the mast so close to dusk, and should have had Neal Hare present. (Docket Entry No. 67, at 203-04).

On cross-examination, Turner denied that when he prepared his report, he knew of an August 2010 email from Hare transmitting the purchase order calling for a top drive and tracks. He conceded that the evidence showed that he did in fact receive this email. (*Id.* at 217). Turner also acknowledged the evidence showing that AMASE evaluated pin sizes for the A-frame to A-frame connection of the *Majestic's* mast in December 2010. Based on this evaluation, AMASE concluded that the 3-inch pin was overstressed by 4 times based on the anticipated load. (*Id.* at 227-28, 231). Turner acknowledged that AMASE failed to notify anyone at DDE of this result. (*Id.* at 232). Turner also acknowledged that despite his claims about the sleeve reducing the moment of force on the connecting pins, none of the calculations that AMASE made to evaluate the pin connections accounted for a sleeve. (Docket Entry No. 68, at 38). Turner did not perform a center-of-gravity calculation based on the weight DDE added to the mast design before preparing his report. (*Id.* at 68).

The court finds that Turner's testimony that DDE had some responsibility for the mast's failure was more credible than Dr. Ross's testimony that DDE had no responsibility. But Turner's testimony about the additional weight, stresses, and forces that DDE's changes added was undermined by his testimony that increasing the diameter of the bull line used to raise the mast (which would make it easier to lift the mast) would increase the raising forces on the mast.

His testimony about the additional weight that DDE added and AMASE's lack of knowledge of including a top drive and tracks on the mast was also undermined by documents showing that both Turner and Hare had the purchase order showing that a top drive and tracks would be included in the *Majestic*'s mast. Turner's testimony about the pin sleeve was also less credible in the absence of calculations supporting his theory that the sleeve reduced the force on the connection pins and made the 3-inch pin size AMASE specified proper.

Based on the evidence admitted at trial, the testimony described above, and credibility determinations, the court enters the findings and conclusions set out below.

C. Findings of Fact

Neal Hare with AMASE served as the project engineer for the design work on the *Majestic*. His work encompassed the design for the mast as well as for the rest of the rig.⁷ At Dunn's request, Hare based the *Majestic* mast design on the design for the *Constitution* rig. The *Constitution*'s design called for 4-inch diameter pins connecting the A-frames on the mast. (Docket Entry No. 64, at 47). Hare changed the pin diameters on the *Majestic* for the A-frame to A-frame connection from the 4 inches used in the *Constitution* to 3 inches. Hare testified that he changed the design to comply with the third edition of the American Petroleum Institute ("API") 4F Specification,⁸ published after the *Constitution*'s mast was designed.

Hare did computer modeling and engineering analysis on the mast design and sent it to Turner for review. Turner approved the design with 3-inch pins connecting the mast's A-frames. An AMASE draftsman made the drawings for the mast that Hare had designed. Hare did not

⁷ The mast project number was 29029 and the remainder of the barge was 28112. (Docket Entry No. 64, at 38).

⁸ API Specification 4F "states the requirements and gives recommendations for suitable steel structures for drilling and well servicing operations in the petroleum industry. . . . This specification is applicable to all new steel . . . masts . . . with a date of manufacture after the effective date of this specification." API Specification 4F, American Petroleum Institute, available at http://www.api.org/publications-standards-and-statistics/standards/whatsnew/publication-updates/new-exploration-and-production-publications/api_spec_4f.

perform bending and stress evaluations to determine whether the 3-inch connecting pins for the mast could withstand the predicted weight of AMASE-designed mast.

Dunn selected DDE to build the mast at its facility in Stryi, Ukraine. Hare traveled there in January 2010, at Dunn's request, to find out if DDE's facility "was capable of fabricating the mast of the *Majestic* as designed by AMASE in accordance with the API standards." (Docket Entry No. 67, at 19). Hare sent Dunn a favorable report. (Pl.'s Ex. 9).

On August 24, 2010, Hare met with Dunn, Dave Godin (DDE's president), and Paul Nicholson of Global Drilling Support. (Docket Entry No. 64, at 52–53). Hare learned from Godin that the mast would include a top drive and top-drive tracks. Hare testified that the top-drive tracks were not included in his design or analysis responsibilities. Instead, Godin of DDE took responsibility for designing and installing the top drive and top-drive tracks. Although Hare knew that the mast would have a top drive and top-drive tracks, he did not ask for information about them or change his analysis to include the weight they would add to the mast.

As of August 23, 2010, AMASE had not provided design drawings to DDE. On August 30, 2010, Dunn and Godin signed a purchase order for the mast fabrication. The order specifically included an I-beam track for the top drive. This purchase order was sent to Hare at AMASE. Hare forwarded the purchase order to Turner. *See* Pl.'s Exs. 7, 10; (Docket Entry No. 64, at 58).

On September 8, 2010, Turner emailed AMASE's design drawings to DDE. (Pl.'s Ex. 3). The drawings were labeled "issued for construction" and showed Hare's approval. (Pl.'s Ex. 6). The drawings called for a 3-inch diameter pin connection between the mast's A-frames, using material grade 4140.

The parties dispute whether the mast shown in the design drawings AMASE sent to DDE on September 8, 2010 contained a top drive or tracks. The drawings are unclear and the testimony is inconsistent. Robert Dunn testified that the September 8, 2010 drawings showed “a mast with a top drive hanging in it.” (Docket Entry No. 64, at 61). But Dunn and other witnesses acknowledged that the drawings did not show top-drive tracks. Turner testified that the drawings showed only a traveling block. (Docket Entry No. 67, at 163). The court finds that the September 2010 design drawings did not show a top drive or tracks.

The court also finds that by of August 2010 (and as early as March 2009), both Hare and Turner of AMASE knew that the *Majestic*’s mast would include a top drive and top-drive tracks. The *Constitution* drawings used as the basis for the *Majestic* drawing had a top drive in mid-2008, when Turner and Hare worked on the refurbishment. (Docket Entry No. 64, at 40). In March 2009, Hare prepared an analysis of the *Majestic*’s substructure that considered the weight of a top drive in the barge’s mast. (*Id.* at 40–41). In August 2010, Hare attended a meeting in which Dunn, Nicholson of Global Drilling Services, and Godin of DDE discussed adding the top drive to the *Majestic* mast. That same month, Dunn sent Hare a DDE purchase order for the *Majestic* that included top-drive tracks, and Hare forwarded that purchase order to Turner. Another AMASE engineer, Joe Brown went to the Ukraine on April 5, 2011 to do a quality-control inspection at the fabrication yard. Brown wrote a report, which he sent to Dunn. (Pl.’s Ex. 24). Brown’s report referred to top-drive track beams on the mast. *Id.*

DDE’s project engineer, Chris Haist, converted the American steel shapes shown in the design drawings to European steel shapes. That involved more than converting inches into centimeters. European and Imperial steel shapes are similar but differ in dimensions, thickness, length, and weight. (Docket Entry No. 64, at 69-70). Haist acknowledged that the change to

European steel shapes was a design change. Turner and Hare knew that DDE would be changing these measurements and shapes. AMASE received progress reports from DDE during the mast's fabrication. These reports showed that DDE had converted the drawings to European steel shapes. Pl.'s Exs. 13-15.

DDE made other changes, including:

- adding a trap door on the crown over the ladder;
- adding a self-closing gate on the racking board ladder;
- adding a pedestal for another air winch on the racking board;
- adding three 5-kip padeyes;
- adding an aircraft warning beacon;
- adding a 200-mm wire tray;
- using bearings instead of bushings;
- adding multiple platforms on the mast;
- adding span breakers and structural steel angles;
- adding pin plates and a stair to the racking platform;
- adding a ladder on each side of the A-frame of the mast; and
- adding covers to the platforms.

(Docket Entry No. 64, at 123-24, 126). DDE also increased the thickness of the bull line used to raise the mast. DDE prepared construction drawings reflecting these modifications and used these drawings to fabricate the mast. The A-frame pin connections were the 3-inch pins AMASE had specified.

DDE placed its "API plate" on the drawings it prepared to fabricate the mast. (Docket Entry No. 64, at 165). Haist, the DDE engineer working on the fabrication, did not separately

analyze the A-frame connection pins. (Docket Entry No. 65, at 7, 250-51). Nor did DDE's finite-elements analysis software "take into account connection details." (Def.'s Ex. 61).

On November 24, 2010, during the fabrication work, AMASE provided DDE with additional design drawings. (Pl.'s Ex. 4). AMASE labeled these drawings, like those sent on September 8, "issued for construction." (Pl.'s Ex. 16 (G102 Revision 1)). Like the September 8 drawings, the November 24 design drawings called for two 3-inch diameter A-frame connection pins, labeled "J." *Id.* (G102 Revision 1, Sheet 2 of 2). Unlike the September 8 drawings, the November 24 drawings showed top-drive tracks.

An AMASE invoice sent to Megadrill shows that Chris Taylor, an AMASE engineer, made changes to the mast design, specifically to the pin connections, months after AMASE sent DDE the issued-for-construction design drawings. (Pl.'s Ex. 17). The AMASE invoice contains entries organized by date listing the employee's initials, a brief nonspecific description of the work completed, the time period and the hours worked. The invoice shows that between December 1 and December 15, 2010, AMASE billed time Taylor spent to "recheck sizing of mast section pins," "check sizing of mast diagonal pins," "recalculate A[-]frame forces," "resize A[-]frame pins and pin plates," "redesign A[-]frame pin connections," and "correct A[-]frame pin drawings. *Id.* at DUNN-00087. The invoice entries describing Taylor's work on December 27 and December 28, 2010 stated: "check, correct, and print pin [calculations]." *Id.* at DUNN-00088. On January 10, 2011, another AMASE employee with the initials BDB "check[ed the] pin schedule and pin details." On January 13, 2011, Taylor made "mast modifications." *Id.* at DUNN-00089. During January 2011, Hare had received several emails from DDE notifying AMASE and Hare of various changes that DDE had made to the mast design because of the changes AMASE had made to the design drawings. Pl.'s Exs. 20, 21.

Hare returned to DDE's fabrication yard in Stryi on January 21, 2011. The mast was still in the fabrication process. Months later, on June 28, 2011, when the mast was shipped to Batam, Galen Tucker of DDE sent Dunn an email "further clarify[ing] [DDE's] side of the story concerning the bushing/bearing issue." (Def.'s Ex. 48). The email has three levels of bullet points. The second and third are under the heading "22/23 January 11 – DDE factor was visited by client representative, Neal Hare, Jr." *Id.* The second bullet point has three subsidiary bullet points: (1) "Inspection of Mast was done," (2) "Drawings were reviewed," and (3) "Follow up meeting with the DDE Chief Engineer, the DDE General Manager, and the DDE QA Manager." *Id.* Five subsidiary bullet points are under the third, which is labeled "follow up meeting." This third bullet point stated that "[d]ue to the installation of Top Drive guide track beams and the additional weight of the aforementioned items, calculations were made using the new weights and resulting raising forces." *Id.* Although Hare did not attend the follow-up meeting, (Docket Entry No. 67, at 95), he knew that including the top-drive tracks and converting to European steel shapes added more weight to the mast than AMASE's design called for.

On January 31, 2011, AMASE updated and revised the drawing "G102 Sheet 1 of 2," adding two pins labeled "P" and two pins labeled "Q" and removing the two pins labeled "J." (Pl.'s Ex. 18 (G102 Revision 2, Sheet 1 of 2)). Pins "J" and "P" are both A-frame connection pins; the "P" pins replaced the "J" pins. (Docket Entry No. 67, at 52). The "J" pins were 3 inches in diameter; the replacement "P" pins were 4 inches in diameter. The design drawing shows that the two larger pins (4 inches in diameter), labeled "P," take the place of the two 3-inch diameter pins, labeled "J." *Compare* (Pl.'s Ex. 18 (G102 Revision 2, Sheet 1 of 2)), *with id.* G102 Revision 1, Sheet 1 of 2).

On February 8, 2011, while DDE was still fabricating the mast, AMASE sent DDE a transmittal memo identifying more drawings. On March 7, 2011, AMASE revised the design drawing “G102 Sheet 2 of 2,” updating the pin list. (Pl.’s Ex. 18 (G102 Revision 2, Sheet 2 of 2)). The record does not show that AMASE sent drawings showing the larger pin sizes to DDE. (Pl.’s Ex. 5); (Docket Entry No. 64, at 75-76).

Taylor and Hare exchanged emails discussing these design changes. In a February 28, 2011 email, Taylor (at AMASE) confirmed to Hare (also at AMASE) that two A-frame connection pins were changed to increase the diameter from 3 inches to 4 inches. In a March 2, 2011 response, Hare asked Taylor to send “them” the change in pin diameter. (Docket Entry No. 65, at 167); (Pl.’s Ex. 19). Hare testified that in the March 2, 2011 email, he was instructing Taylor to send DDE the pin-diameter change. (Docket Entry No. 67, at 74).

Turner was aware of the design change in the pin size between pins “J” and pins “P.” Neither Turner nor Hare knew whether the change was communicated to DDE. The court finds that it was AMASE’s responsibility to communicate the change to the fabricator, and that Turner was among those at AMASE responsible for doing so.

Chris Haist of DDE testified consistently that DDE did not learn of the change to the pin diameter or of AMASE’s reanalysis of the pins. (Docket Entry No. 66, at 64-65). DDE fabricated the mast using the two 3-inch diameter connection pins originally specified in the AMASE design drawings, not the larger size pins, and did not know of AMASE’s design change. The court finds that AMASE and Turner failed to communicate the pin-size change and the reasons to DDE.

In February 2011, Dunn emailed Godin at DDE asking about the kind of inspections DDE had done to ensure the integrity of the mast’s welds. Godin responded that “[i]t is DDE’s

API plate and therefore our liability/responsibility for the final design and inspection as per API and I assure you that we are compliant as we have been audited by the best (including Neal [Hare of AMASE]).” (Def.’s Ex. 46). Godin assured Dunn that because DDE “did the fabrication and used [its] API license and name plate, we are liable for the functionality and ultimate design, thus this becomes a warranty issue.” (Docket Entry No. 64, at 165); (Def.’s Ex. 50).

On December 19, 2011, after the fabrication was completed and the rig had been sent to the Batam shipyard, the A-frame on the mast failed when Ian Dunn attempted to raise it. One leg of the A-frame twisted and buckled, two connection pins bent, and four bolts were sheared. Hare’s report, based on what witnesses at the Batam shipyard told him, stated that the A-frame failed at a load of about 600,000 pounds. (Pl.’s Ex. 25). Hare had calculated the maximum potential load the frame could withstand to be roughly 635,000 pounds.

Hare identified the two A-frame connection pins that bent as the “P” pins from AMASE drawing G102 Revision 2. These are the two pins that AMASE changed during the design process. DDE did not learn of that change and used the smaller (3-inch) pins rather than the updated, larger (4 inch) pins. Hare testified that if DDE had received the drawing labeled G102 Revision 2, the pins used in the fabrication would have been the larger size.

DDE retained CalgaRIG, a Canadian engineering company, to analyze the mast failure. (Docket Entry No. 64, at 96); (Pl.’s Ex. 58). The report concluded that the 3-inch diameter pins were too small to support the weight of the mast’s raising forces. The report also concluded, based on “material tests . . . on the failed components,” that “the material used either matched or exceeded the 3rd party [AMASE’s] specifications.” (Pl.’s Ex. 58). Laboratory testing confirmed this finding. (Docket Entry No. 65, at 39).

The plaintiffs' expert witness, Dr. George R. Ross, testified consistent with his report that the A-frame of the mast failed because the design drawings AMASE sent DDE to use in fabricating the mast called for A-frame connection pins of the wrong diameter. AMASE's own calculations showed that the 3-inch and 4 inch pins were undersized for the anticipated load. The court finds that the 3-inch pins were undersized and that AMASE and Turner failed to notify DDE of that fact and the calculations.

At Megadrill's request, DDE fabricated a new A-frame using 4-inch connecting pins. Megadrill paid the Batam shipyard \$34,825 for laboratory tests on the connection pins and for removing and stabilizing the A-frame, mast, and related equipment.⁹ Megadrill sent the new A-frame by air freight to Nigeria, where the *Majestic* was waiting to begin a preexisting charter agreement. (Docket Entry No. 64, at 99–100); (Def.'s Ex. 86). Megadrill paid \$298,310.13 for air freight and related expenses. (Docket Entry No. 65, at 23). Once in Nigeria, the mast had to be cleared through customs, blasted and painted, and installed on the rig. (*Id.* at 102–03). Megadrill paid \$370,506.32 in shipyard charges in Nigeria for sandblasting, painting, welding, and reinstalling the A-frame after DDE refabricated it. Dunn blasted and painted the mast in Nigeria because the climate in Ukraine was “extremely cold” that winter and Nigeria's “more moderate” climate would result in “a decent job and . . . save the time.” (*Id.* at 103).

DDE invoiced Megadrill \$258,256 for refabricating the mast. (Pl.'s Ex. 35). Megadrill has not paid the invoice and DDE has not yet attempted to collect. (Docket Entry No. 64, at 105). Dunn testified that he is “withholding payment to DDE for the \$258,000 because [he is] waiting for the outcome of this—this trial proceeding.” (Docket Entry No. 64, at 166). Megadrill did pay DDE \$64,670.60 for the services and travel expenses of Jim Thomas, DDE's

⁹ Megadrill claims that this number should be \$70,634. (Docket Entry. No. 71, ¶76). Megadrill's evidence indicates that it paid a total of \$34,825. (Pl.'s Ex. 34, pp. 1-3 and Singapore Test Service Quotation.).

rig-up manager, who oversaw installation of the refabricated mast. (Docket Entry No. 64, at 27, 105).

Megadrill was unable to deliver the *Majestic* to Nigeria in time to begin drilling operations under the charter agreement already in place. The start date was delayed 60 days, “the time that [Megadrill] actually spent having to refab—excluding mobilization time, a refab and reinstall the A-frame onto the *Majestic*.” (Docket Entry No. 64, at 111). As Dunn acknowledged, the *Majestic* had unrelated “commissioning issues,” including problems getting a visa for DDE’s rig manager, which caused between 9 and 14 days of the delay. (Def.’s Ex. 63); (Docket Entry No. 65, at 17, 21).

II. Conclusions of Law

The court has subject-matter jurisdiction under 28 U.S.C. § 1332. Venue is proper in this district under 28 U.S.C. § 1391. Texas law applies.¹⁰

A. The Economic Loss Rule Does Not Preclude Megadrill’s Negligence Claims Against Turner and AMASE

The defendants argue that the economic loss rule forecloses Megadrill’s tort claims against Turner and AMASE because there is a contractual relationship between Megadrill and AMASE and the only remedy sought is damages for economic loss to the subject of the contract itself. “The economic loss rule generally precludes recovery in tort for economic losses resulting from a party’s failure to perform under a contract when the harm consists only of the economic loss of a contractual expectancy.” *Chapman Custom Homes, Inc. v. Dallas Plumbing Co.*, 445 S.W.3d 716 (Tex. 2014) (per curiam). It also prevents a stranger to a contract from claiming economic loss from a contracting party’s negligence in performing the contract. *LAN/STV v.*

¹⁰ Maritime law does not apply because contracts to design vessels do not fall within the court’s admiralty contract jurisdiction. *Kossick v. United Fruit Co.*, 365 U.S. 731, 735 (1961); *Walter v. Marine Office of Am.*, 537 F.2d 89 (5th Cir. 1976).

Martin K. Eby Constr. Co., 435 S.W.3d 234, 249-50 (Tex. 2014); *Grant Thornton LLP v. Prospect High Income Fund*, 314 S.W.3d 913, 923-26 (Tex. 2010).

Although the rule is easily stated, “whether and how to apply the economic loss rule does not lend itself to easy answers or broad pronouncements.” *Lan/STV*, 435 S.W.3d at 245. Instead, “the application of the rule depends on an analysis of its rationales in a particular situation.” *Id.* at 245-46. The primary rationale for the rule is that parties to a contract are in the best position to allocate risk among themselves. *Id.* at 241. The rule also limits the potential for “rippling liability” in contract relationships that a large class of potential third-party claimants could present. *Id.* at 239, 240, 246. Using these rationales, “Texas courts of appeals have uniformly applied the economic loss rule to deny recovery of purely economic losses in actions for negligent performance of services.” *Id.* at 243.

“[P]rofessional malpractice cases are an exception” to the economic loss rule. *Id.* at 243-44. Certain professional relationships create duties separate and independent from a contract between a professional and his or her client. *Id.* These duties can form the basis for negligence claims against professionals, including for services performed under a contract. *Id.* The exception recognizes that standards governing the professions that “are deeply developed and their application uniform and well-settled,” *id.* at 244, reducing the need to defer to the parties’ contractual allocation of duties and risk.

Courts have not, however, extended the professional malpractice exception to allow nonparties to a contract between a contracting party and a professional to recover economic losses caused by the professional’s negligent performance of the contract. *Id.* at 245; *Grant Thornton*, 314 S.W.3d at 920 (restricting the persons who can recover from a professional’s negligence to a “limited group” “avoid[s] . . . unlimited and uncertain liability for economic

losses in cases of professional mistake.”) A nonparty to a contract may recover for a professional’s negligence only if the professional directed its actions to a “known party for a known purpose.” *Lan/STV*, 435 S.W.3d at 245. For example, if a company contracted with an accounting firm to prepare financial statements, the firm may be liable to a current trade creditor of the company for negligent misrepresentations in the financial statements if the firm knew that the creditor would rely on the statements. *Blue Bell, Inc. v. Peat, Marwick, Mitchell & Co.*, 715 S.W.2d 408, 412 (Tex. App.—Dallas, 1986, writ ref’d n.r.e.).¹¹ But the accounting firm would not be liable for negligently preparing financial records to potential investors who had no previous connection to the corporation and were not known to the accounting firm. *Grant Thornton*, 314 S.W.3d. at 921, 923-26.

Licensed professional engineers, such as Edward Turner, and the firms at which they practice, such as AMASE, fall within the professional malpractice exception to the economic loss rule. *See* TEX. CIV. PRAC. & REM. CODE § 150.001-003 (governing negligence suits against “licensed or registered professionals,” defined to include a “licensed professional engineer or any firm in which such licensed or registered professional practices”); *LAN/STV*, 435 S.W.3d at 244 & n.42 (citing TEX. CIV. PRAC. & REM. CODE § 150.001-03 in discussing “negligence actions against other professionals”). Under this exception, Turner and AMASE owed Megadrill duties independent of the duties the oral contract between Megadrill and AMASE imposed. *Id.*; *see also Barzoukas v. Found. Design, Ltd.*, 363 S.W.3d 829, 836 (Tex. App.—Houston [14th Dist.] 2012, pet. dismissed).

¹¹ The *Blue Bell* court held that an accounting firm could be liable if it “knows or should know” of a third party who would rely on financial statements. *Blue Bell, Inc.*, 715 S.W.2d at 412. Subsequent cases have clarified that actual knowledge is required; it is insufficient to show that the accounting firm “should know” that the third party would rely on the financial statements. *See Abrams Ctr. Nat. Bank v. Farmer, Fuqua & Huff, P.C.*, 225 S.W.3d 171, 177 (Tex. App.—El Paso 2005, no pet.) (discussing the implicit overruling of *Blue Bell* by *McCamish, Martin, Brown & Loeffler v. F.E. Applying Interests*, 991 S.W.2d 787, 792 (Tex. 1999)).

The defendants argue that the Texas Supreme Court's decision in *LAN/STV* bars recovery under the economic loss rule, but that case is distinguishable. In *LAN/STV*, the Dallas Area Rapid Transit Authority ("DART") contracted with an architecture firm to create plans for a light rail system for the City of Dallas. *LAN/STV*, 435 S.W.3d at 236. DART also independently contracted with a construction company to build the system. *Id.* The construction company built the system based on plans the architecture firm created under its contract with DART. *Id.* The plans were faulty, which increased the construction company's costs of performing its contract with DART. *Id.* at 236-37. The construction company sued the architecture firm for negligently preparing the plans. *Id.* at 237.

The Texas Supreme Court held that the economic loss rule barred the construction company's negligence claim. *Id.* at 249-50. The Court acknowledged that the architecture firm could fall within the professional exception to the economic loss rule. *Id.* at 244. But because the construction company was a stranger to the architectural firm's contract with DART and did not "choose the architect, or instruct it, or pay it," the architectural firm had not directed its contract performance to the construction company. *Id.* at 247. The Court also worried about upsetting the bargained-for balance of risk between the contracting parties by allowing a non-party's negligence claim against a contracting party. *Id.* at 248. The Court applied the economic loss rule to prevent the construction company from suing the architecture firm for negligently preparing the plans for DART. *Id.* at 249-50.

In *LAN/ST*, the construction company asserted its negligence claim against the architect based on a professional duty that the architect owed to someone else. *Id.* at 247. In this case, Megadrill is asserting a negligence claim against Turner and AMASE based on professional duties they owed Megadrill. The concerns about "rippling liability" to third parties that the court

expressed in *LANS/STV* court are not present here. Turner and AMASE directed their services to a known party for a known purpose. The professional contract between AMASE and Megadrill did not allocate contractual risks of loss, so allowing the negligence claim would not displace the parties' contract.

Turner owed Megadrill a duty as a licensed professional engineer, as did AMASE, the professional firm where Turner practiced. Allowing Megadrill to recover against Turner and AMASE in negligence is consistent with the rationale of the economic loss rule. The economic loss rule does not preclude Megadrill's negligence claim against Turner and AMASE.

Turner also argues that he cannot be sued individually for actions he took in the scope of his employment for AMASE. Turner may be held individually liable for those negligent acts because he owed Megadrill a duty independent from the duties his employer, AMASE, owed. *See Tri v. J.T.T.*, 162 S.W.3d 552, 562-63 (Tex. 2005); *Leitch v. Hornsby*, 935 S.W.2d 114, 117 (Tex. 1996); *Great Plains Tr. Co. v. Morgan Stanley Dean Witter & Co.*, 313 F.3d 305, 315 (5th Cir. 2002). Turner's professional duties provide a basis to hold him individually liable to Megadrill.

B. Megadrill's Negligence Claim Against Turner and AMASE and Breach-of-Contract Claim against AMASE

1. The Elements of Negligence

To prove negligence, Megadrill must establish: (1) a legal duty owed; (2) breach of that duty; and (3) damages proximately caused by that breach. *Nabors Drilling, U.S.A., Inc. v. Escoto*, 288 S.W.3d 401, 404 (Tex. 2009). Proximate cause requires both cause-in-fact and foreseeability. *Travis v. City of Mesquite*, 830 S.W.2d 94, 98 (Tex. 1992). "These elements cannot be established by mere conjecture, guess, or speculation." *Doe v. Boys Clubs of Greater Dallas, Inc.*, 907 S.W.2d 472, 477 (Tex. 1995). The test for cause-in-fact is whether the act or

omission was a substantial factor in causing the injury, without which the harm would not have occurred. *Marathon Corp. v. Pitzner*, 106 S.W.3d 724, 727 (Tex. 2003). Furnishing a condition that made the injuries possible is inadequate to show cause-in-fact. See *IHS Cedars Treatment Ctr. of Desoto, Tex., Inc. v. Mason*, 143 S.W.3d 794, 799 (Tex. 2004).

The first two elements are satisfied. Engineers and the firms where they work are held to a high standard of care in providing their clients engineering services. Engineers may be liable for failing to exercise reasonable care and skill commensurate with that standard of care. See *IOI Sys., Inc. v. City of Cleveland*, 615 S.W.2d 786, 790 (Tex. App.—Houston [1st Dist.] 1980, writ ref'd.). Turner and AMASE breached their duties to Megadrill to exercise reasonable care in providing engineering design services when they approved the mast design with undersized pins connecting the A-frames, failed to do bending stress calculations, and failed to notify DDE promptly after learning that the 3-inch pins were too small, and changing the design as a result.

2. The Elements of Breach of Contract

Under Texas law, “[t]o recover for breach of contract, a plaintiff must show (1) the existence of a valid contract, (2) the plaintiff performed or tendered performance, (3) the defendant breached the contract, and (4) the plaintiff suffered damages as a result of the defendant’s breach.” *Expro Ams., LLC v. Sanguine Gas Exploration, LLC*, 351 S.W.3d 915, 920 (Tex. App. – Houston [14th Dist.] 2011, pet. denied); accord *Mullins v. TestAmerica, Inc.*, 564 F.3d 386, 418 (5th Cir. 2009). Damages must be a “natural, probable, and foreseeable consequence of the defendant’s conduct.” *Mead v. Johnson Grp., Inc.*, 615 S.W.2d 685, 687 (Tex. 1981).

The first three elements are satisfied. Megadrill and AMASE had a valid oral contract, Megadrill performed under that contract by paying AMASE, and AMASE breached the contract

when it provided substandard engineering design services. The deficient performance included transmitting issued-for-construction design drawings calling for undersized pins, without performing calculations to ensure that the pins would withstand the anticipated forces, and failing to promptly notify DDE after learning that the 3-inch connecting pins were undersized.

3. Causation: Negligence

The next element for both the negligence and contract-based claims is causation. Turner and AMASE argue that DDE's own negligence in adding weight to the mast by adding a top drive is a new and independent cause that absolves them of any liability. "A new and independent cause of an occurrence is the act or omission of a separate and independent agent, not reasonably foreseeable, that destroys that causal connection, if any, between the act or omission inquired about and the occurrence in question." *Colum. Rio Grande Healthcare, L.P. v. Hawley*, 284 S.W.3d 851, 858 (Tex. 2009). Whether an independent act destroys the causal connection depends on "whether the intervening cause and its probable consequences were such as could reasonably have been anticipated by the original wrongdoer." *Dew v. Crown Derrick Erectors, Inc.*, 208 S.W.3d 448, 452 (Tex. 2006); *Hawley*, 284 S.W.3d at 857-58. The "threshold and controlling" inquiry is whether the original wrongdoer could reasonably anticipate the intervening cause and its consequences. *Hawley*, 284 S.W.3d at 858.

Texas courts look to the following six factors to determine whether a third party's actions are a new and intervening cause:

- a. the fact that the intervening force brings about harm different in kind from that which would otherwise have resulted from the actor's negligence;
- b. the fact that its operation or the consequences thereof appear after the event to be extraordinary rather than normal in view of the circumstances existing at the time of its operation;

- c. the fact that the intervening force is operating independently of any situation created by the actor's negligence, or, on the other hand, is or is not a normal result of such a situation;
- d. the fact that the operation of the intervening force is due to a third person's act or to his failure to act;
- e. the fact that the intervening force is due to an act of a third person which is wrongful toward the other and as such subjects the third person to liability to him;
- f. the degree of culpability of a wrongful act of a third person which sets the intervening force in motion.

Id. at 858 (citing RESTATEMENT (SECOND) OF TORTS § 442 (1965) and *Phan Son Van v. Peña*, 990 S.W.2d 751, 754 (Tex. 1999)). All six factors need not be satisfied, but all should “be considered.” *Peña*, 990 S.W.2d at 754.

In *Hawley*, the plaintiff was diagnosed with advanced cancer after a colon resection but was not timely notified and went months without proper treatment. She sued the hospital, the surgeon who resectioned her colon, and the hospital's pathologist, asserting that each negligently failed to notify her. Before trial, she nonsuited the two doctors. The jury found that the hospital caused the plaintiff's injuries. On appeal, the hospital argued that the jury should have been given an instruction that the doctor's failures to notify the plaintiff were new and independent causes absolving the hospital of liability. The Texas Supreme Court rejected the hospital's argument, concluding that the doctors' negligence was reasonably foreseeable and resulted in the same risk of untimely cancer treatment as the hospital's original negligence. The Court discussed the six factors, as follows;

The doctors' failures to independently follow up, analyzed according to the [six] factors, respectively, (a) did not implicate a different risk of harm than the hospital's failure to ensure the doctors knew of the pathology report because both failures implicated the risk that [the plaintiff's] cancer would go untreated; (b) did not later appear to yield extraordinary consequences in view of the circumstances at the time of the cancer diagnosis because the cancer predictably progressed as a result of both failures; and (c) were not completely independent from the risk created by the hospital's negligence—that [the plaintiff's] cancer would go untreated—even though the doctors' actions and failures to act were independent

of [the hospital's] actions. The doctors' failures to discover the cancer report were (d) due to their own lack of inquiry about the report and (e) wrongful toward [the plaintiff] and could have possibly subjected them to liability. However, the doctors' alleged negligent actions and omissions, even assuming they made the doctors culpable, did not necessarily make their conduct a superseding cause.

Hawley, 284 S.W.3d at 858.

Three of the six *Hawley* factors support the conclusion that DDE's negligence, like the doctors' negligence in *Hawley*, was not a "new and independent cause." The harm caused by DDE's negligence—the mast's failure when it was raised for the first time—was the type of harm that would have resulted from Turner's and AMASE's negligence in approving the mast design with undersized pins and failing to notify DDE when they learned that the pins were undersized. DDE's negligence in adding the weight of a top drive to the mast and not verifying the effect on the mast's structural integrity was predictable in effect and not extraordinary, given the fact that Turner and AMASE had notice that the mast would include a top drive and top-drive tracks and failed to account for that weight. DDE was not operating independently of a situation created by Turner's and AMASE's negligence. To the contrary, DDE's negligence stemmed from, and compounded, Turner's and AMASE's negligence.

The remaining three factors support allocating some fault to DDE, as Turner and AMASE argued. DDE failed to conduct its own calculations when it added weight to the mast, and admitted that failure. But because DDE's negligence is bound up with Turner's and AMASE's, the factors on balance support the conclusion that DDE's acts were not a new and independent force that absolves Turner and AMASE of any liability.

The court concludes that DDE's negligence was not a new and independent cause preventing recovery against Turner and AMASE because DDE's negligence was reasonably

foreseeable and the *Hawley* factors show that its negligence was intertwined with Turner's and AMASE's negligence.

4. Causation: Breach of Contract

AMASE similarly contends that even if it breached the contract by providing inadequate design services, DDE's intervening design changes and its fabrication actually caused the mast failure. AMASE points to Chris Haist's admission that DDE created its drawings "from scratch" and that the API standards made DDE was responsible for those drawings. But Haist also testified that DDE created its drawings "based" on the design drawings it received from AMASE. Those drawings called for 3-inch pins that would be overstressed by the projected lift load, even before any weight was added during fabrication. The evidence also showed that AMASE knew before transmitting its design drawings to DDE that it would be adding a top drive and converting the designs from American to European steel shapes, both of which would add weight to the mast. The 3-inch pins were overstressed before DDE added weight.

The court concludes that Turner and AMASE owed Megadrill a duty, which they breached, causing damage to Megadrill. Megadrill may recover against Turner and AMASE on its negligence claims and against AMASE on its breach-of-contract claim.¹²

D. Allocating Proportionate Responsibility

Turner and AMASE have designated DDE as a responsible third party. Because the court concludes that DDE's negligence did not break the causal connection between Turner's or AMASE's negligence and the mast failure, fault allocation is required.

Chapter 33(a) of the Texas Civil Practice & Remedies Code provides:

¹² AMASE argues that certain damages for lost profits and unpaid invoices are unrecoverable as a matter of law even if Megadrill prevails on its claim for breach of contract. The court addresses whether Megadrill may recover those damages below.

The trier of fact, as to each cause of action asserted, shall determine the percentage of responsibility, stated in whole numbers, for the following persons with respect to each person's causing or contributing to cause in any way the harm for which recovery of damages is sought, whether by negligent act or omission, by any defective or unreasonably dangerous product, by other conduct or activity that violates an applicable legal standard, or by any combination of these:

- (1) each claimant;
- (2) each defendant;
- (3) each settling person; and
- (4) each responsible third party who has been designated under Section 33.004.

TEX. CIV. PRAC. & REMEDIES CODE § 33.003.

The "percentage of responsibility" is the percentage the trier of fact attributes to each claimant, defendant, settling person, or responsible third party for causing or contributing to cause the harm for which damages are sought. TEX. CIV. PRAC. & REMEDIES CODE § 33.012. The fact-finder apportions responsibility according to relative fault, each person's role in causing that harm, "in any way." *Nabors Well Servs., Ltd. v. Romero*, ___ S.W.3d ___, 2015 WL 648858, at *5 (Tex. 2015).

Turner and AMASE were primarily responsible for designing the mast. They generated the issued-for-construction design drawings without performing calculations to ensure that the pin sizes were adequate to support the anticipated load. DDE, as an API nameplate licensee, bore some responsibility to verify the design pin connections used for fabrication, including after making changes adding weight to the mast. But Turner and AMASE knew during the design process that DDE would include the top-drive tracks on the mast and would convert to European steel shapes, adding to the mast weight. Despite this knowledge, Turner and AMASE failed to perform pin calculations needed to ensure the mast's structural integrity. Turner and AMASE

also failed to notify DDE when AMASE employees learned that the 3-inch pins would be overstressed and had to be larger in diameter. These failures require allocating Turner and AMASE a larger share of fault than DDE.

The court finds and concludes that Turner and AMASE together are 75 percent at fault because of their negligence in designing, drafting, and transmitting the issued-for-construction drawings and in failing to transmit updated drawings and information that the original design drawing called for undersized pins. The court finds and concludes that as between Turner and AMASE, Turner is 25 percent at fault and AMASE is 50 percent at fault. AMASE engineers created the flawed issued-for-construction design drawings under contract and failed to transmit the proper information. Turner negligently performed his duties as a supervisor over the AMASE employee working on the drawings and failed to meet his personal obligation to provide drawings with the proper pin size and transmit the proper information.

DDE's admissions of fault, its status as an API license holder, its decisions to add weight to the mast, and its failure to perform pin-connection and related calculations, all support allocating it part of the responsibility. The court finds and concludes that DDE is 25 percent at fault.¹³

E. Damages

The court concludes that Megadrill is entitled to recover on its breach of contract claim against AMASE and its negligence claims against Turner and AMASE. The final issue is whether Megadrill is entitled to all of the damages it seeks. Turner and AMASE argue that

¹³ The defendants argue that Ian Dunn and Megadrill bear some responsibility for the mast failure because Dunn had little experience raising masts on new construction and did it at dusk without a crewmember located at the A-frame and without Neal Hare present. But Ian Dunn raised the mast before it was dark, and did not exceed the load capacity Hare provided. Ian Dunn bears no responsibility for the mast failure.

Megadrill may not recover for the delay in performing the charter agreement and for the amounts DDE invoiced that Megadrill has not paid. Both arguments are analyzed below.

1. Damages for the Delayed Charter

After Megadrill rested, Turner and AMASE moved for a partial finding under Rule 52(c) that Megadrill's claim for roughly \$8,600,000 in lost charter income failed because, Megadrill fully performed the 3-year charter agreement, did not present evidence that the delay led to missed opportunities, and did not prove the expenses it incurred while the *Majestic* was out of service. The court granted the motion in part because the plaintiffs did not show that they were unable to perform the charter agreement or other contract because the *Majestic* was out of commission for 60 days. Robert Dunn testified that the *Majestic* had no other pending charters and that the *Imperial*, Megadrill's other drilling barge, was "warm-stacked" with no charter agreements. (Docket Entry No. 65, at 22–23); *see In re M/V Nicole Trahan*, 10 F.3d 1190, 1194 (5th Cir. 1994) (plaintiffs must show that there is an active market for the vessel to recover for the vessel's unavailability; a per diem rate is insufficient). The court limited delayed-charter damages to the recoverable expenses Megadrill incurred as a result of *Majestic's* mast repairs. (Docket Entry No. 67, at 138–39).

Megadrill argues that it is entitled to recover \$4.3 million (\$72,000 x 60 days) in expenses incurred during the 60-day period. (Docket Entry No. 67, at 112–13). Megadrill relies on Michael Topham's testimony. Topham testified that the charter agreement was supposed to begin on March 1, 2012, but the repaired mast did not arrive in Nigeria until April 30, 2012. (Docket Entry No. 67, at 112). Megadrill incurred \$72,000 each day for the "marine spread," consisting of "tugs, barges, et cetera," and for "labor, employees, insurance, catering, repairs of the equipment while it's in the dock, transportation costs and numerous rentals that were

negotiated.” (Docket Entry No. 67, at 112). Topham testified that Megadrill “absolutely” paid these expenses. (Docket Entry No. 67, at 122).

AMASE and Turner argue that these expenses are not recoverable because Megadrill did not enter into the charter agreement until after AMASE had contracted with Megadrill. AMASE and Turner argue that they could not have reasonably foreseen any expenses resulting from the delay in performing the charter agreement.

Consequential damages are not recoverable unless they are foreseeable. *Arthur Andersen & Co. v. Perry Equip. Corp.*, 945 S.W.2d 812, 816 (Tex. 1997). Consequential damages for contract breach are not foreseeable “unless the parties contemplated at the time they made the contract that such damages would be a probable result of the breach.” *Stuart v. Bayless*, 964 S.W.2d 920, 921 (Tex. 1998). If a breach of contract causes delay in performing a separate contract, the plaintiff may recover damages for the delayed contract if the breaching party knew of that separate contract or otherwise knew of specific reasons why untimely performance would cause the damages. *Elliott v. Jackson Petroleum Co.*, 390 S.W.2d 378, 378-80 (Tex. Civ. App.—Amarillo 1965, writ ref’d n.r.e.); *Brooks Supply Co. v. Hines*, 223 S.W. 709, 710-11 (Tex. Civ. App.—Fort Worth 1920, writ dismissed w.o.j); *Texas A&M Research Found. v. Magna Transp., Inc.*, 338 F.3d 394, 398 (5th Cir. 2003); *see also* 24 WILLISTON ON CONTRACTS § 64:22 (4th ed.) (“Where, for example, the importance of the defendant’s performance exactly at the time agreed or with unusual promptness has been brought home to the defendant by notice, or the defendant had some other reason to know of the special facts or circumstances, the defendant will be liable for the exceptional consequences of its delay.”).¹⁴

¹⁴ Williston uses “[E]xceptional consequences” as a synonym for consequential damages.

The case of *Brooks Supply v. Hines*, 223 S.W. 709, 709 (Tex. Civ. App.—Fort Worth 1920, writ dismissed w.o.j.), is instructive. The defendant agreed to provide a drilling rig to the plaintiff. At the time of contracting, the defendant knew that the plaintiff needed the rig to drill a well under a separate contract already in place. *Id.* at 709-10. The defendant did not deliver the drilling rig on time. The plaintiff had to acquire a more expensive rig from a separate source, increasing his costs to perform the separate drill contract. *Id.* at 710. The court held that the plaintiff was entitled to the increased costs of performing the separate contract. Because the defendant “was informed of the purpose for which [plaintiff] desired the rig and of the necessity of a prompt delivery, . . . it was within the easy contemplation of [defendant] that upon a failure to deliver the rig [plaintiff] would seek to secure another in order to avoid a forfeiture of his lease.” *Id.*

A breaching party who does not know about the separate contract is not liable for damages from the delay in performing that contract. *Texas A&M*, 338 F.3d at 398. In *Texas A&M*, a research team located in South Africa contracted with a shipping company to have equipment delivered via cargo ship to a research vessel, also in South Africa, that the team had chartered. *Id.* at 398. The researchers needed the equipment for research during a specific two-month window. *Id.* The shipper knew that the equipment was needed for research and that the delivery was time-sensitive, but the shipper did not know of the specific time window. *Id.* at 398, 405. When it became apparent that the shipment would be late, the research team intercepted the cargo mid-journey and tried to deliver it themselves, without success. *Id.* at 398. The untimely delivery wasted days of the charter period and the money spent to prepare the ship for the equipment. *Id.*

The Fifth Circuit held that the money spent attempting the alternate delivery was recoverable. “[A]lthough a general awareness that harm could result from any untimely delivery does not justify an award of consequential damages, [the shipping company] had actual notice of the importance to [the research team] of timely delivery.” *Id.* The money spent in preparing the research vessel for the equipment was also recoverable, because “[the shipping company] should reasonably have known that certain costs would be incurred in preparing for research dependent upon the cargo and that those expenditures would be wasted in the event [the shipping company] failed to deliver the shipment in time.” *Id.* But the Fifth Circuit upheld the district court’s exclusion of money spent on the loss of charter days. The court reasoned that “based on [the delivery company’s] superficial knowledge of the purposes and methods of the research project, it could not reasonably have expected that a failure to deliver [the] cargo would render the [research vessel] and its scientists incapable of performing any research for an extended period of time.” *Id.*

Like the damages that were denied in *Texas A&M*, Megadrill’s damages flow from an inability to start the charter contract by the date set in the separate contract. In *Texas A&M*, the breaching party at least knew generally that timely delivery was important. *Id.* Here, the separate charter contract was not signed until well after Turner and AMASE agreed to do the design work and Turner and AMASE had no knowledge of the circumstances making delivery time sensitive. Turner and AMASE could not have foreseen that the delay in delivering a working mast and rig would cause damages from delaying Megadrill’s ability to perform the Nigeria charter agreement.

2. Damages for the Unpaid Invoice

In addition to seeking damages for the expenses incurred from the delay in beginning the charter, Megadrill seeks \$258,250 in damages to pay for DDE's refabrication of the A-frame after the mast failure. Megadrill relies on the invoice that DDE sent after refabricating the mast. Megadrill has not paid that invoice, DDE has not tried to collect on it, and Megadrill's president, Robert Dunn, did not testify that Megadrill would pay the bill if Megadrill prevailed in this lawsuit. (Docket Entry No. 64, at 104-05); Pl.'s Ex. 34. Turner and AMASE argue that awarding damages based on the invoice would result in a windfall to Megadrill if it does not have to pay DDE. They also argue that DDE has elected to treat the invoiced refabrication costs as covered by its warranty.

If DDE covers the repair and replacement cost under a warranty, Megadrill could not recover it as damages. *Birchfield v. Texarkana Mem'l Hosp.*, 747 S.W.2d 361, 368 (Tex. 1987). The collateral source rule does not apply to benefits a tortfeasor confers. *Johnson v. Dallas Cnty.*, 195 S.W.3d 853, 855 (Tex. App.—Dallas 2006, no pet.) (collateral source rule applies to “payments to the injured party from sources *other than the tortfeasor*.”) (emphasis added). But the record does not show that DDE will cover or forgive the costs. In an internal memorandum, a DDE vice-president stated his belief that the replacement of the A-frame was a “warranty issue.” (Def.'s Ex. 64). But DDE later submitted an invoice for payment for the A-frame replacement. (See P. Ex. 35). There was no indication that DDE would not be seeking payment for the invoice. The fact that Megadrill has not yet paid the invoice is not determinative. The statute of limitations has not run on a DDE claim for nonpayment.

The mast repair and replacement costs are recoverable damages for Turner's and AMASE's negligence and AMASE's breach of contract. It was clearly foreseeable that the A-

frame and mast would be damaged if not properly designed. *See Arthur Andersen & Co. v. Perry Equip. Corp.*, 945 S.W.2d 812, 816 (Tex. 1997) (“[C]onsequential damages need not be the usual result of the wrong, but must be foreseeable.”). Indeed, Megadrill was not required to actually replace the A-frame in order to recover. *See Ortiz v. Flintkote Co.*, 761 S.W.2d 531, 536 (Tex. App.—Corpus Christi 1988, writ denied) (actual repair of a damaged building was not required in order to receive repair damages). Megadrill may recover damages for the unpaid invoice and for expenses it paid to have the damaged A-frame and mast repaired or replaced and installed.

III. Conclusion and Order

The court finds and concludes that Megadrill is entitled to recover on its negligence claims against Turner and AMASE and its breach-of-contract claim against AMASE. Megadrill is entitled to recover the following sums: (1) \$34,825 in Marco Polo Shipyard charges to remove and stabilize the A-frame mast and related equipment and for the laboratory tests on the failed pins; (2) \$59,716.60 for the services of Jim Thomas, DDE’s rig-up manager, from December 24 to 27, 2011, December 30, 2011 through January 5, 2011, and March 14, 2012 through March 26, 2012; (3) \$4,954.00 for Jim Thomas’s travel expenses; (4) \$298,310.13 in costs incurred in sending the refabricated mast by air freight to Nigeria; and (5) \$370,506.32 in costs incurred to sandblast, paint, weld, and install the refabricated A-frame and the related shipyard charges in Nigeria. Turner is jointly liable for up to 25 percent of these damages for his own professional negligence.

The parties are ORDERED to submit a proposed final judgment consistent with this Memorandum and Opinion by **October 23, 2015**.

SIGNED on October 13, 2015 at Houston, Texas.

A handwritten signature in black ink, reading "Lee H. Rosenthal". The signature is fluid and cursive, with a large, stylized "L" and "R".

Lee H. Rosenthal
United States District Judge